



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,004	02/10/2004	David paul Yach	1578.106 (11428-US-PAT)	9095
44298	7590	03/17/2008	EXAMINER	
DOCKET CLERK				
PO BOX 12608				
DALLAS, TX 75225				
			ART UNIT	PAPER NUMBER
			2167	
			MAIL DATE	DELIVERY MODE
			03/17/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/776,004

Applicant(s)

YACH ET AL.

Examiner

ROBERT TIMBLIN

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action corresponds to application 10/766,004 filed 2/10/2004.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/29/2007 has been entered.

Response to Amendment

Claims 1 and 15 have been amended. Accordingly, claims 1-2 and 4-20 are pending prosecution.

Claim Objections

Claims 1 and 15 are objected to because of the following informalities: it is unclear what is meant by use of the word "selectably." Alternative, clearer language such as "selectively" is recommended.

Similarly, claim 1 is objected to because it is unclear what "theretoegether" means to intend.

Claim 1 is objected to because the use of the word “for” may lead the claim to indefinite interpretations. Specifically, the language “apparatus *for*”, hash value being formed *for*”, and “content retriever *for*” should be re-worded as to positively claim these features as necessary in the apparatus.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

In review of claim 1 and depending claims 4, and 4-14 these claims are rejected under 35 U.S.C. 101 because the claims are directed towards an apparatus that may be construed as a software apparatus. In other words, the claims may be construed as software *per se* and thus functional descriptive material (i.e. see MPEP 2106.01). For example, Applicant’s ‘apparatus’ comprises a hash generator or a content retriever that may be interpreted by one of skill in the art to be software components. When claims 1-2, and 4-14 positively claim hardware components of the apparatus, this may lead one to interpret the claims as a hardware apparatus and thus making the claims statutory.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the amended paragraph 0041 in Applicant's specification now cancels the portion of which the newly amended claims 1 and 15 rely on for support. This cancellation changes the scope of the claims and thus constitutes as new matter.

Claims 1 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. With the deleted text from Applicant's paragraph 0041, the claims 1 and 15 now lack enabling support.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 2 and 4 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by **Leonetti** (hereinafter **Leonetti**, US 6,771,951).

Regarding claim 1, **Leonetti** teaches apparatus for a radio communication system, (see column 2, lines 25 – 26 “...a wireless cellular and personal communication system...”) having a network part that maintains at least a network-copy of a first database [PD - 118] containing data and a mobile node that maintains at least a mobile-copy of the first database [110] containing data (See column 3, lines 59 – 61 “The PDC 108 contains a personal database (PD) 118 that contains the storage of the personal database information.” And see column 4 lines 49 – 52 “The interrogation requests initiates the process of ascertaining the correspondence of the personal information database in the subscriber’s mobile terminal 110 and the PD 118 contained within the PDC 108.”);

the data of the network-copy and the mobile-copy of the first database, respectively, correspond when the network-copy and the mobile-copy of the first database are in match with one another (See column 5, lines 4 – 8 “...teaches a method of insuring that an active database, such as that embodied in the subscriber’s mobile terminal 110, and a secondary database, such as the PD 118 contained within the PDC 108, are concurrent.”),

said apparatus for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database to place the network-copy and the mobile-copy in

match with each other (See column 5, lines 10 – 12 “The modified record and the active database virtual checksum is communicated to the secondary database.” This alters the data in the other database, putting them in match with each other.), said apparatus comprising:

a hash generator (col. 2 line 37-38) embodied at the mobile node and adapted to receive representations of a substantially complete copy of at least the mobile-copy of the at least the first database, said hash generator forming a hash value from said substantially complete copy of the representations provided thereto (See column 4, lines 60 – 62 “The comparison of single checksums can be used in one embodiment to indicate if changes have been made to the entire database.), a hash value formation by the hash generator being more computationally intensive to form than a checksum, its formation being triggered when the network-copy first data base and the mobile-copy of the first data base are suspected of being out of synchronization with each other (abstract, col. 2 line 26-34, and col. 4 line 60-67; determining changes that have been made);

the hash value for communication to the network part to determine whether the network-copy and the mobile-copy are in match with one another (See column 4, lines 56 – 59 “The checksum for the personal database contained in the subscriber mobile terminal 110 is compared with the calculated checksum for the PD 118 contained within the PDC 108.”); and

a content retriever (col. 3 line 32-35) embodied at the mobile node, said content retriever for retrieving data from the mobile-copy of the at least the first database upon detection of determination that the network-copy and the mobile-copy are out of match, the data retrieved by said content retriever for communication to the network part, to be used to match [mirrors] the network-copy and the mobile-copy theretogether. (See column 5, lines 12 – 15 “The secondary

database record is modified and a virtual checksum for the entire secondary database is calculated to ensure that the secondary database mirrors the active database.” The content retriever is inherent, since the content is obviously retrieved in order to be modified).

Leonetti does not explicitly state forming a hash value and a hash value formation by the hash generator being more computationally-intensive to form than a checksum.

However, it would have been obvious to one of skill in the art to interpret Leonetti's checksum as being the same as a hash value (e.g. see intrinsic evidence "accuhash" - www.accuhash.com/what-is-checksum.html page 1 wherein “checksum” and hash value” are synonymous) because information run through a hash function resulting in a hash/checksum value is beneficial for verifying the integrity of files as well as determining whether a file has been altered.

Regarding claims 2, **Leonetti** additionally shows said hash generator generates the hash values [interrogated] of a copy of at least the mobile-copy of the at least first database responsive to an external triggering event [outgoing or incoming call], occurrence of which is detectable at the mobile node. (See column 2, lines 27 – 32 “In a preferred embodiment, the personal database information contained within the subscribers mobile terminal or handset is interrogated during the initial phase of an outgoing or incoming wireless telephone call to ascertain if there have been any changes made to the personal database.”)

Regarding claim 4, **Leonetti** additionally teaches said hash generator generates first-type hashes [entire database checksum] upon detection of an external triggering event [outgoing or

incoming call], indications of occurrence of which is detectable at the mobile node (See column 4 lines 52- 56 “One sample embodiment of the process is the technique of calculated numerical values that uniquely identify the database information known as checksum and well known in the art of database management.” and see column 2, lines 27 – 32 “In a preferred embodiment, the personal database information contained within the subscribers mobile terminal or handset is interrogated during the initial phase of an outgoing or incoming wireless telephone call to ascertain if there have been any changes made to the personal database.”); and wherein said hash generator generates second-type hashes responsive to determination of mismatch of the first-type hashes, generated by said hash generator, with network-calculated values (See column 4, lines 62 – 65 “If the indications are that changes have been made, then checksums for the separate parts of the personal database can be calculated and compared to the checksums for the separate arts of the remote personal database.” The separate calculation is an example of a second-type hash.)

Regarding claim 5, **Leonetti** additionally teaches the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records, each data record formed of fields including at least a first key field and at least a first record field, and wherein the second-type hashes [checksum of the record] selectively generated by said hash generator are formed of values of the at least the first key field. (See column 5, lines 8 – 10 “The checksum of a modified database record is incorporated into a virtual checksum for the entire active database.”)

Regarding claim 6, **Leonetti** additionally teaches the determination that the network-copy and the mobile-copy are out of match is made responsive to values of the second-type hashes [checksum of the modified database record] formed of the values of the at least the key field. (See column 5, lines 8 – 10 “The checksum of a modified database record is incorporated into a virtual checksum for the entire active database.”)

Regarding claim 7, **Leonetti** additionally teaches the data retrieved by said content retriever comprises both the at least the first key field [virtual checksum] and the at least the first record field. (See column 5, lines 10 – 12 “The modified record and the active database virtual checksum is communicated to the secondary database.”)

Regarding claim 8, **Leonetti** teaches a further improvement of apparatus for the network part also for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database (see column 5, lines 12 – 15 “The secondary database record is modified...”), said apparatus comprising:

a determiner adapted to receive values of the hash generated by said hash generator, said determiner for determining whether the values of the hash correspond with locally-generated values (See column 4, lines 65 – 67 “In this manner, and efficient search and determination of what changes have made to a personal database can be ascertained...” and see column 5, lines 4 – 8 “...teaches a method of insuring that an active database, such as that embodied in the subscriber’s mobile terminal 110, and a secondary database, such as the PD 118 contained within the PDC 108, are concurrent.”); and

a requestor coupled to said determiner to receive indications of determinations made thereat, said requestor selectably for requesting additional information associated with the mobile-copy of the at least the first database (See column 4, lines 62 – 65 “If the indications are that changes have been made, then checksums for the separate parts of the personal database can be calculated and compared to the checksums for the separate arts of the remote personal database.” The separate calculation is an example additional information requested.)

Regarding claim 9, **Leonetti** additionally teaches the hash generated by said hash generator is selectably of a first hash-type and at least a second hash-type, and wherein the locally-generated values with which said determiner compares the hash are correspondingly selectably of a first hash-type and a second hash-type (See column 4, lines 60 – 65, showing the two different types of hashes that can be selected – either for the entire database, or individual records.)

Regarding claim 10, **Leonetti** additionally teaches the additional information requested by said requestor comprises a request for the mobile node to deliver hash information of the second hash-type to the comparator (See column 4, lines 62 – 65 “If the indications are that changes have been made, then checksums for the separate parts of the personal database can be calculated and compared to the checksums for the separate arts of the remote personal database.” The separate calculation is an example of a second-type hash.)

Regarding claim 11, **Leonetti** additionally teaches the data maintained at the network-copy and the mobile-copy of the at least the first database is comprised of data records (See column 4,

lines 11 – 19 showing different data records maintained in the database) and wherein the additional information requested by said requester comprises a request for the mobile node to deliver values of at least portions of the data records. (See column 4, lines 6 – 9 showing that the values are sent upon request.)

Regarding claim 12, **Leonetti** teaches a comparator adapted to receive the values of the at least the portions of the data records responsive to the request therefor to the mobile node, said comparator for comparing the values with corresponding values of the network-copy of the at least the first database. (See column 4, lines 62 – 65 “If the indications are that changes have been made, then checksums for the separate parts of the personal database can be calculated and compared to the checksums for the separate arts of the remote personal database.” The separate calculation is an example of a second-type hash.)

Regarding claim 13, **Leonetti** teaches a database value updater coupled to said comparator, said database value updater selectably operable responsive to comparisons made by said comparator to alter at least one data record of a selected one of the mobile-copy and the network-copy of the at least the first database. (See column 5, lines 12 – 13 “The secondary database record is modified...”)

Regarding claim 14, **Leonetti** teaches database value updater operates pursuant to a selected conflict resolution protocol. (See column 5, lines 13 – 15 “...and a virtual checksum for the entire secondary database is calculated to ensure that the secondary database mirrors the active

database.” This secondary database checksum is an example of conflict resolution protocol, to make sure that the changes now make the updated database correspond to the active database.)

Regarding claim 15, **Leonetti** teaches a method of communication in a radio communication system, (see column 2, lines 25 – 26 “...a wireless cellular and personal communication system...”)

having a network part that maintains at least a network-copy first database [PD - 118] containing data and a mobile node that maintains at least a mobile-copy first database [110] containing data (See column 3, lines 59 – 61 “The PDC 108 contains a personal database (PD) 118 that contains the storage of the personal database information.” And see column 4 lines 49 – 52 “The interrogation requests initiates the process of ascertaining the correspondence of the personal information database in the subscriber’s mobile terminal 110 and the PD 118 contained within the PDC 108.”);

the data of the network-copy and the mobile-copy of the first database, respectively, correspond when the network-copy and the mobile-copy of the first database are in match with one another (See column 5, lines 4 – 8 “...teaches a method of insuring that an active database, such as that embodied in the subscriber’s mobile terminal 110, and a secondary database, such as the PD 118 contained within the PDC 108, are concurrent.”),

said method for selectably altering the data of at least one of the network-copy and the mobile-copy of the at least the first database to place the network-copy and the mobile-copy in match with each other (See column 5, lines 10 – 12 “The modified record and the active database

virtual checksum is communicated to the secondary database.” This alters the data in the other database, putting them in match with each other.), said method comprising:

generating a first hash value in the mobile node from a complete copy of the mobile-copy of the first data base when the network-copy and the mobile copy are suspected of being out of the first data base when the network-copy and the mobile copy are suspected of being out of synchronization with each other (col. 4 line 60-67), said first hash value being more computationally-intensive to form than a checksum;

selectably sending the first hash value from the mobile node to the network part, the first hash value being representative of the mobile-copy of the first database (See column 4, lines 60 – 62 “The comparison of single checksums can be used in one embodiment to indicate if changes have been made to the entire database.);

comparing, at the network part, the first hash value sent during said operation of selectably sending with corresponding network-copy of the first hash value (See column 4, lines 56 – 59 “The checksum for the personal database contained in the subscriber mobile terminal 110 is compared with the calculated checksum for the PD 118 contained within the PDC 108.”); and

selectably requesting additional information [another checksum for separate parts] regarding the mobile-copy first database responsive to comparisons made during said operation of comparing the first hash value. (See column 4, lines 62 – 65 “If the indications are that changes have been made, then checksums for the separate parts of the remote personal database can be calculated and compared to the checksums for the separate parts of the remote personal database.”).

Leonetti does not explicitly state forming a hash value and a hash value formation by the hash generator being more computationally-intensive to form than a checksum.

However, it would have been obvious to one of skill in the art to interpret Leonetti's checksum as being the same as a hash value (e.g. see intrinsic evidence "accuhash" - www.accuhash.com/what-is-checksum.html wherein "checksum" and hash value" are synonymous) because information run through a hash function resulting in a hash/checksum value is beneficial for verifying the integrity of files as well as determining whether a file has been altered.

Regarding claim 16, **Leonetti** additionally teaches the additional information requested during said operation of selectably requesting comprises second hash information from the mobile node to the network part, the second hash information also representative of the mobile copy of the at least the first database. (See column 4, lines 62 – 65 "If the indications are that changes have been made, then checksums for the separate parts of the remote personal database can be calculated and compared to the checksums for the separate parts of the remote personal database.")

Regarding claim 17, **Leonetti** additionally teaches sending the second hash information from the mobile node to the network part (See column 4, lines 49 - 52); comparing, at the network part, the second hash information sent during said operation of sending the second hash information with corresponding network-copy second hash information (See column 4, lines 62 – 65 "If the indications are that changes have been made, then

checksums for the separate parts of the remote personal database can be calculated and compared to the checksums for the separate parts of the remote personal database.”); and

selectably requesting at least portions of the mobile-copy [modified database record] of the at least the first database responsive to comparisons made during said operation of comparing the second hash information (See column 5, lines 8 – 10, “The checksum of the modified database record is incorporated into a virtual checksum for the entire active database.”)

Regarding claim 18, **Leonetti** additionally teaches the operations of delivering the at least the portions of the mobile-copy to the network part (See column 5, lines 10 – 13 “The modified record and the active database virtual checksum is communicated to the secondary database.”), comparing the portions of the mobile copy delivered during said operation of delivering with corresponding portions of the network-copy of the at least the first database (see column 4, lines 62 – 65 “If the indications that changes have been made, then checksums for the separate parts of the personal database can be calculated and compared to the checksums for the separate parts of the remote personal database.”), and selectably causing overwriting of the portions of a selected one of the network-copy and the mobile-copy responsive to comparisons made during said operation of comparing the portions of the mobile-copy. (See column 5, lines 12 – 13 “The secondary database record is modified...”.)

Regarding claim 19, **Leonetti** additionally teaches the selected one of the network-copy and the mobile-copy of which the portions thereof are selectably caused to be overwritten is selected according to a conflict resolution scheme. (See column 5, lines 13 – 15 “...and a virtual

checksum for the entire secondary database is calculated to ensure that the secondary database mirrors the active database.” This secondary database checksum is an example of conflict resolution protocol, to make sure that the changes now make the updated database correspond to the active database.)

Regarding claim 20, Leonetti additionally teaches the operation of creating a change-history by indicating overwriting of the portions selectably caused during said operation of selectably causing. (See column 4, lines 62 – 64 “If the indications are that changes have been made...” This shows that some change history necessarily would have to be made – which eventually causes the overwriting of the records determined to be different.)

Response to Arguments

Applicant's arguments in the reply filed 11/29/2007 have been fully considered but they are not persuasive.

The Applicant argues on page 8-9 that the claimed hash value and the checksum of Leonetti are distinguished. In attempt to clarify this aspect, Applicant has deleted the portion of the specification supporting the interpretation of the similarity of a hash value and checksum. However, the Examiner is not persuaded as the text which was deleted remains in the original disclosure and thus still supports the interpretation that a hash value and checksum are the same. Furthermore, intrinsic evidence (e.g. “accuhash”) shows that a hash value and checksum may be

synonymous and thus the terms essentially mean the same thing. The obviousness of this similarity is presented in the office action above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. "accuhash" -www.accuhash.com/what-is-checksum.html. Page 1-2, accessed 6/15/2007. A copy of this document is placed on file.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT TIMBLIN whose telephone number is (571)272-5627. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Art Unit: 2167

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ROBERT TIMBLIN/

Examiner, Art Unit 2167

/John R. Cottingham/

Supervisory Patent Examiner, Art Unit 2167